# ABSTRACT

[00117]     Techniques for canceling pilot interference in a wireless (e.g., CDMA) communication system.  In one method, a received signal comprised of a number of signal instances, each including a pilot, is initially processed to provide data samples. Each signal instance's pilot interference may be estimated by despreading the data samples with a spreading sequence for the signal instance, channelizing the despread data to provide pilot symbols, filtering the pilot symbols to estimate the channel response of the signal instance, and multiplying the estimated channel response with the spreading sequence to provide the estimated pilot interference.  The pilot interference estimates due to all interfering multipaths are combined to derive the total pilot interference, which is subtracted from the data samples to provide pilot-canceled data samples. These samples are then processed to derive demodulated data for each of at least one (desired) signal instance in the received signal.